6.0 Environmental Consultation, Review, and Permit Requirements

Several Federal laws and administrative procedures must be met by the proposed action. This section lists and briefly describes requirements that may apply to elements of this project, actions taken to assure compliance with these requirements, and the status of consultations or permit applications.

6.1 National Environmental Policy Act

This FEIS was prepared according to NEPA (42 USC 4321 et seq.). NEPA applies to all major Federal actions that may significantly affect the quality of the human environment. BPA will take into account potential environmental consequences and will use all practical means to protect, restore, and enhance the environment.

6.2 Threatened and Endangered Species

The Endangered Species Act (16 USC 1536) provides for conserving threatened and endangered species of fish, wildlife and plants. Federal agencies must ensure proposed actions do not jeopardize the continued existence of any endangered or threatened species, or cause the destruction or adverse modification of their habitat. When conducting any environmental impact analysis for specific projects, agencies must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service and identify practicable alternatives to conserve or enhance such species.

Informal consultation with the USFWS and NMFS pursuant to the Endangered Species Act has been initiated. The bald eagle, the peregrine falcon, and three salmonoids are the only listed species known or suspected to occur in the project area. A biological assessment (BA) of the projects impact on threatened and endangered species was prepared by Beak Consultants, Inc. and is enclosed as Appendix C. "No effect" determinations were made regarding impacts to the peregrine falcon or the Snake River spring/summer chinook salmon. BPA concluded that the proposed Coyote Springs Cogeneration Project is "not likely to effect" the bald eagle. BPA recently discovered that the biological assessment and associated findings were mistakenly sent to the Olympia office of the USFWS. The BA has since been sent to the Portland office of USFWS.

6.3 Fish and Wildlife Conservation

The Fish and Wildlife Conservation Act of 1980 (16 USC 2901 et seq.) encourages Federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. In addition, the Fish and Wildlife Coordination Act (16 USC 661 et seq.) requires Federal agencies undertaking projects affecting water resources to consult with the USFWS and the state agency responsible for fish and wildlife resources to conserve or improve wildlife resources.

The cogeneration plant, transmission line, and pipeline have been considered as the impact zone, which is defined as the boundary of the facility site. Within this designated zone, only limited resources that have the capability to promote fish and wildlife habitat were identified. Refer to Section 6.2 regarding endangered and threatened species, and Section 5, which describes natural features and discussion of impacts at the project site.

6.4 Heritage Conservation

Congress has passed many Federal laws to protect the nation's historical, cultural, and prehistoric resources. These include the National Historic Preservation Act, the Archeological Resources Protection Act, the American Indian Religious Freedom Act, the National Landmarks Program, and the World Heritage List. Preserving cultural resources allows Americans to have an understanding and appreciation of their origins and history. A cultural resource is an object, structure, building, site or district that provides irreplaceable evidence of human history of national, state or local significance. Cultural resources include National Landmarks, archeological sites, and properties listed (or eligible for listing) on the National Register of Historic Places.

Construction and operation of the cogeneration plant, transmission line and the gas pipeline could potentially affect historic properties and other cultural resources. Consultation with the Oregon State Historic Preservation Office regarding the plant site and transmission line, concluded with the finding that "No National Register or eligible properties are known to exist within the area of the undertaking's potential environmental impact, but it is highly possible that the area contains undiscovered historic sites of potential significance. Therefore, a cultural resources field survey is required."

PGE hired Archaeological Investigations Northwest, Inc. of Portland, Oregon, to conduct an intensive cultural resources survey for the Coyote Springs Plant site and the transmission line route. One projectile point, a core and a possible chopper were found on the slope of the railroad fill on the north border of the plant site. No other resources were found.

PGT similarly conducted an intensive survey of their proposed pipeline route. No prehistoric or significant historic resources were found (see 5-48). The SHPO, the Bureau of Reclamation, the Navy and the Confederate Tribes of the Umatilla were provided the survey results. To date, only the Umatilla have commented.

The State Historic Preservation Office issued a memo dated June 14, 1993 that acknowledges the survey report by the Museum of Natural History, and states that there are no issues raised by the report that are considered to be significant. The *Oregon DOE Proposed Order* (Appendix D) makes the following proposed findings:

(1) Based on the literature review, the site survey covering the proposed facility sites, and the lack of known historic, cultural or archaeological resources within the project impact area, the construction and operation of the proposed facilities will not result in a significant adverse impact to historic, cultural, or archeological resources.

(2) The site certificate will require that the applicant comply with applicable state laws regarding Indian graves, removal of historic materials and archaeological objects and sites.

The following proposed conditions are also stated in the ODOE Proposed Order:

(1) If the area in which artifacts were found is to be disturbed by construction or operation, the applicant shall obtain the recommendation of the SHPO for clearance requirements for the affected area, and

(2) The Applicant shall comply with all laws and regulations relating to historic, cultural and archeological resources, and with the conditions of the Site Certificate.

6.5 State, Areawide, and Local Plan and Program Consistency

The construction and operation of a power plant and related transmission facilities could conflict with the goals and objectives of local government land use plans.

In January 1986, the Oregon Land Conservation and Development Commission formally acknowledged the comprehensive land use plan and land use regulations of Morrow County, and found that the plan complied with Statewide Planning Goals. The City of Boardman's Comprehensive Plan and land use regulations were acknowledged in February 1978. Because the state acknowledged these comprehensive plans, the proposed project does not need to address consistency with the Statewide Planning Goals, as adopted by Senate Bill 100, as amended.

The proposed site of the facility is within the Port of Morrow's Industrial Park. The land has been leased from the Port of Morrow. The plant site is in Morrow County on unincorporated land that is within the City of Boardman's Urban Growth Boundary (UGB). The proposed electrical transmission line is also within Morrow County. A portion of the transmission line is outside the City of Boardman's UGB. Morrow County has planning jurisdiction over the land required for both the plant site and the transmission line under the Boardman Urban Growth Area Joint Management Agreement, which was signed by Morrow County, the Port of Morrow and the City of Boardman in March 1990 (ODOE, 1993).

The power generation facility site is zoned PI, Port Industrial. Power generation and utility facilities are uses that are permitted outright in this zone. The proposed transmission line will cross land zoned PI and MG (see Map 6). PGE will need a variance from Morrow County for the transmission line to cross MG zoned land. PGE applied to Morrow County for this variance on September 13, 1993 (ODOE, 1993).

Both the City of Boardman and Morrow County signed a Land Use Compatibility Statement for the proposed project, dated September 5, 1993. The statement indicates that the facility is consistent with Morrow County and City of Boardman land use plans. (ODOE, 1993.)

Subject to issuance of the land use variance for the transmission line, the ODOE staff report makes a proposed finding that the "applicant will have demonstrated receipt of necessary local land use approvals and compliance with Statewide Planning Goals." (ODOE, 1993.)

The 1991 Northwest Conservation and Electric Power Plan (Power Plan) recommends that all major power projects, that is, projects over 50 MW, be consistent with the resource acquisition principles and conditions of the current power plan. However, because the output of the proposed project will not be sold to BPA, the Northwest Power Planning Council will not be required to make a consistency determination. Therefore, ODOE did not asked PGE to provide an explanation of consistency with the Power Plan (ODOE, 1993). It is unknown if the proposed project is consistent with the Power Plan.

6.6 Farmland Protection

The Farmland Protection Policy Act (7 USC 4201 et seq.) directs Federal agencies to identify and quantify adverse impacts of Federal programs on farmlands. The Act's purpose is to minimize the amount Federal programs contribute to unnecessary and irreversible conversion of agricultural land to non-agricultural uses.

The gas pipeline and new 500-kV transmission line will cross irrigated farmlands for a distance of 0.5 km (1500 ft.). Agricultural activities are permitted to continue over the pipeline and within the transmission line right-of-way. Irrigation equipment will be adjusted to minimize impacts to agricultural lands. It is expected that less than 0.2 ha (0.5 acres) of farmland (roads and tower sites) would be taken from agricultural production.

The transmission line crosses lands zoned industrial. The site is committed to urban development, therefore, no farmland as defined in the Farmland Protection Policy Act will be affected and the project is in compliance with the Act.

6.7 Recreation Resources

Recreation resources are areas designated by the Wild and Scenic Rivers Act, the National Trails System Act, the Wilderness Act, or parklands, and other ecologically sensitive areas. None of these resources are impacted by the proposed project.

6.8 Floodplains

Floodplains are mapped by the Federal Emergency Management Agency as 100-year floodplains. Areas designated 100-year floodplains have a 1 percent chance of being flooded in a given year. Under Executive Order 11988, floodplain development is discouraged whenever there is a practicable alternative. If specific projects are proposed that might cause development in a floodplain, alternatives to developing in the floodplain will be considered.

The Columbia River shoreline is approximately 190 m (625 ft.) north of the proposed plant site. The plant and transmission line are within the *historic* Columbia River floodplain. However, dams on the Columbia River now regulate its flows, so the proposed plant site and transmission line corridor are considered outside the Columbia River's 100-year floodplain.

6.9 Wetlands

Areas inundated by surface or groundwater sufficient to support vegetation requiring saturated or inundated soil conditions for growth and reproduction are known as "wetlands." Examples include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflow areas, and mudflats. Under Executive Order 11990, construction in wetlands is discouraged whenever there is a practicable alternative. For specific projects other regulations also may apply:

- Section 404 of the Clean Water Act
- Section 10 of the Rivers and Harbors Act of 1899
- National Environmental Policy Act
- Fish and Wildlife Coordination Act
- Oregon's Removal-Fill law

If a permit is needed for a specific project, permitting agencies must find that the project's public values exceed the resource's public values, and that there are no other practicable alternatives.

Wetlands close to the project are shown on Map 8. The wetland bordering Messner Pond is nearest to proposed facilities. The proposed plant site, transmission line corridor, and pipeline route all avoid wetland areas. The proposed project will not impact wetlands and complies with Executive Order 11990.

6.10 Global Warming

Gases that absorb infrared radiation and prevent heat loss to space are called greenhouse gases. Greenhouse gases are thought to be connected to global warming. Greenhouse gases include: CO_2, CH_4, N_2O, NO_x, non-methane volatile organic compounds and stratospheric ozone-depleting substances such as chlorofluorocarbons.

The quantity of CO_2 emitted when fossil fuels are burned is proportional to the carbon content of the fuel. The more carbon present, the more CO_2 emitted. The proposed plant would use natural gas to fire the combustion turbines. Natural gas is primarily composed of methane, which contains one carbon atom and four hydrogen atoms. Because of its low carbon content, natural gas combustion produces about 40-50 percent less CO_2 than coal and approximately 25 percent less than petroleum products (Cornot-Gandolphe, 1993).

As mentioned above, the plant will use methane to fire the turbines. Methane is at least 20 times more potent a greenhouse gas than CO_2. Because of this, it is important to keep methane releases to a minimum. Methane emitted from the world's natural gas pipelines and natural gas mining operations is less than 10 percent of methane emitted from natural sources such as tundra, swamps, forest floors, termites and cows (Sheppard, et al., 1982). In addition, most natural gas leaks occur within residential distribution systems and not in wholesale distribution systems such as the one linked to this plant. New techniques have virtually eliminated methane escape during drilling.

The source of natural gas for the proposed cogeneration plant is from actively producing gas fields in Alberta and British Columbia, Canada. The number of natural gas wells that would be needed to supply PGE requirements was estimated by PGT. The average total yield of Canadian natural gas wells was divided into the total requirements of the Coyote Springs Plant (41 billion BTUs per day). Using this method, the output of 16 gas wells would be used each year by the Coyote Springs Plant (PGT, 1993). For perspective, 4,000 Canadian gas wells were drilled in 1991 and the total number of wells in Canada number in the hundreds of thousands (PGT, 1992). Thus the Coyote Springs Plant will use only a small amount of gas compared to that available in Canada. The world's proven reserves are expected to last approximately 58 years at the present consumption rate (*Inside Energy/with Federal Lands*).

Emissions of NO_x from the facility will be controlled by best available control technology.

Reducing greenhouse gas emissions also involves energy conservation. If less fossil fuel is consumed, fewer pollutants are generated. Cogeneration facilities are considered energy efficient because excess steam generated from power production is used by nearby industries that would otherwise generate their own steam, which would consume energy.

President Clinton has committed the United States to reducing its greenhouse gas emissions to 1990 levels by the year 2000. The Clinton administration has issued a Climate Change Action Plan to accomplish this objective. The plan encourages the use of natural gas for power generation, energy conservation measures, and reforestation projects. Currently, PGE does not plan to offset plant CO_2 emissions with reforestation.

In summary, the proposed plant's comparatively low CO_2 emissions, the gas industry's low percentage of losses in the wholesale gas distribution system, the plant's control of NO_x and N_2O emissions, and the facilities cogeneration capability combine to minimize the plant's global warming impacts. However, plant impacts could be further reduced by reforestation.

6.11 Coastal Zone Management Consistency

The Coastal Zone Management Act of 1972 requires Federal actions be consistent, to the maximum extent practicable, with approved state Coastal Zone Management Programs. If proposed projects could affect the coastal zone, BPA will consult with the state and ensure consistency with state programs. The project does not occur in the coastal zone, and thus is not subject to provisions of the Act.

6.12 Energy Conservation at Federal Facilities

The proposed plant is not a Federal facility. PGE would design buildings to meet Oregon energy conservation standards.

6.13 Pollution Control at Federal Facilities

The proposed plant will not be a Federal facility.

6.14 Noise Control

The proposed plant is within an industrial site. An analysis of plant noise and compliance with Oregon noise standards was conducted by Chester Environmental, a consulting firm hired by PGE. Noise contributed by construction and operation of the plant was found to be in compliance with Oregon noise standards. The ODOE Proposed Order (Appendix D) makes the following Proposed Finding:

> Based on the applicant's commitment to design and operate the proposed facility so as to meet the noise standard and limits of OAR Chapter 340, Division 35, and based on the noise analysis report documenting the ability to meet those standards and limits, the Coyote Springs Cogeneration Plant is capable of meeting the noise regulation standards and limits, and facility operation should cause no significant impacts to the surrounding area.

6.15 Federal and State Licensing and Permit Requirements for New Power Resources

This section describes licensing and permit requirements for new power resources. Information on mitigating environmental impacts in the legislation requiring licenses or permits, or references to appropriate regulations covering mitigation, are included in the discussion. The focus here is licensing and permit requirements needed at the generation site. The required permits for fuel procurement and transportation to the generation site are also important topics, but are outside the scope of this document. The following two Federal licensing requirements do not apply:

- Nuclear Regulatory Commission (NRC) licensing
- Federal Energy Regulatory Commission licensing of hydroelectric facilities

6.15.1 Certification to DOE under the Powerplant and Industrial Fuel Use Act

The Powerplant and Industrial Fuel Use Act of 1978, amended in 1981 and 1987, requires that baseload power plants with natural gas or petroleum as the primary energy source must have the capability to use coal or another alternative fuel as its primary energy source in lieu of natural gas or petroleum. Certification must be submitted to DOE prior to constructing a new powerplant or converting an existing power plant to baseload operation. Both BPA and PGE have contacted DOE. The Coyote Springs Cogeneration Project falls within an exemption clause of the Act. PGE is preparing a letter to DOE requesting exemption in accordance with this Act.

6.15.2 Emission Permits under the Clean Air Act

The basic statute for regulating air quality in the U.S. is the Clean Air Act. Clean Air Act-related permits described here apply to a new power resource.

Air Quality Regulations

Ambient Air Quality Standards - (40 CFR 50) (OAR 340-31-005 through 040) The U.S. Environmental Protection Agency has established national ambient air quality standards (NAAQS) to protect public health with an adequate margin of safety. NAAQS exist for a set of pollutants known as criteria pollutants (NO_x, SO_2, SO_4, hydrogen sulfide (H_2S), CO, particulates (TSP/PM-10), lead, asbestos, beryllium, mercury, vinyl chloride, fluorides, sulfuric acid mist, and ozone (O_3). EPA has designated all areas of the United States as attainment, non-attainment, or unclassified areas. Areas are classified by specific pollutants. Morrow County is designated as an unclassified/attainment area for criteria pollutants.

Prevention of Significant Deterioration (PSD)/New Source Review (NSR) - (40 CFR 52.21) (OAR 340-20-220 through 276) Any new source with emissions that exceed specified significance levels (OAR 340-20-225, Table 1) must undergo a NSR process. As part of this process, PSD applicability is determined. The PSD program is designed to protect air quality in areas cleaner than the NAAQS (attainment and unclassified areas). New fossil fuel-fired steam electric plants in attainment or unclassified areas that emit or have the potential to emit more than 100 tons per year of any criteria pollutant must acquire a PSD permit prior to construction. To obtain a PSD permit the proposed facility must: (1) use best available control technology to control emissions; (2) perform an air quality analysis to demonstrate that facility emissions do not cause a violation of NAAQS or PSD increments; (3) analyze impacts to soils, vegetation and visibility; (4) demonstrate that the project does not affect Class I areas; and (5) undergo adequate public participation. PSD increments (mentioned above) are the maximum ambient concentrations of criteria pollutants (as predicted by air quality dispersion modeling) allowed within attainment areas. The increments are small in Class I areas (pristine areas such as national parks) and higher in Class II and Class III areas. EPA has not yet designated any Class III areas (highly industrialized regions), which leaves the rest of the nation designated as a Class II area. Boardman is in a Class II area.

The proposed Coyote Springs Plant has the potential to emit 280 tonnes (260 tons)/year NO_x), 564 tonnes (513 tons)/year) CO and 86 tonnes (78 tons)/year TSP/PM-10, therefore, it is subject to NSR/PSD requirements for these pollutants. EPA has delegated the implementation of the Federal PSD program to DEQ. DEQ exercises its PSD delegated authority using its own regulations that are intended to be at least as stringent as Federal requirements.

New Source Performance Standards (NSPS) - (40 CFR part 60) (OAR340-25-505 through 675) NSPS apply to new sources and address particulate, opacity, SO_2 and NO_x emissions. Emission standards for stationary gas turbines (OAR 340-25-645) and industrial commercial institutional steam generating units (OAR 340-25-553) are applicable to this facility. Whenever any source is subject to more than one emission limitation rule, regulation, provision or requirement relating to the control of any air contaminant, the most stringent applies.

Air Contaminant Discharge Permit - (OAR 340-20-140, 20-185) and Fees (OAR 340-20-155) Any source emitting more than 10 tons/year of any criteria pollutant, or any source category listed in Table 1 (OAR 340-20-155) must acquire an Air Quality Contaminant Discharge Permit from State or local air pollution authorities. The Oregon DEQ issued an Air Contaminant Discharge Permit to PGE for the Coyote Springs Cogeneration Plant on April 6, 1994 (see Appendix F).

Notice of Construction and Approval of Plans - (OAR 340-20-020 through 032) Any process with emissions to the atmosphere is required to obtain a notice of construction from the state of Oregon prior to facility construction.

Plant Site Emission Limits (PSEL) - (OAR 340-20-300 through 320) All sources subject to State Air Contaminant Discharge Permit requirements are also subject to PSEL requirements. PSEL are baseline emission limits based on facility-wide emission rates.

Fugitive Emissions/Odors - (OAR 340-21-050 through 060) No odor impacts are expected.

Visibility - (OAR 340-21-015) This rule covers plume opacity. The proposed facility will comply with this rule.

Air Toxics - *Significant Emission Rates (SER) for the Hazardous Air Pollutant Interim Program*, December 1991. (Not a regulation but an interim DEQ policy.) Emissions will be below standards.

General Conformity Rule - The proposed facility will not fall under the General Conformity Rule because it is required to obtain a PSD/NSR permit and is therefore presumed to conform with State Implementation Plans.

6.16 Discharge Permits under the Clean Water Act

Aquatic systems intended to be protected as waters of the U.S. under the Clean Water Act are, in general, rivers, streams, lakes, estuaries, and special aquatic sites, including wetlands. Permits for discharges into waters of the U.S. are required under Sections 402 and 404. Section 402 regulates incidental discharges from construction activities. Section 404 regulates intentional discharges into waters of the U.S. to create dry land. Two sections of the Clean Water Act and their relationship with this project are discussed below.

Section 402 - National Pollutant Discharge Elimination System (NPDES) regulated by Oregon Department of Environmental Quality (DEQ).

PGE has registered for coverage under the General Permit 1200 C, and Morrow County has issued a NPDES stormwater permit and Erosion and Sedimentation Control Plan for construction of the plant and transmission line. The NPDES permit and Erosion and Sedimentation Control Plan are attached as Appendix G and Appendix H. PGE will prepare a Spill Prevention Control and Countermeasures Plan 90-days prior to beginning operational testing of the plant.

Section 404 - This section of the Clean Water Act is regulated by the U.S. Army Corps of Engineers. Fill and removal is regulated by the Oregon Division of State Lands under the Oregon Removal Fill Law. Generally, waterfilled depressions created in dry land incidental to construction activities and pits excavated in dry land for the purpose of obtaining fill or sand, are not considered waters of the U.S. unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States (preamble to 33 CFR 320-330/page 41217 under Section 328.3: Definitions).

Discharging fill into the gravel mining pond that is currently being mined, generally is not a regulated activity under Section 404 of the Clean Water Act.

Oregon Removal Fill Law - The Oregon DSL regulates the discharge of fill or the removal of material from waters of the State. Oregon does not regulate surface mining pits if the site is not protected in the local comprehensive plan.

The gravel mining pit is not regulated under Oregon Removal Fill law.

6.17 Safe Drinking Water Act

6.17.1 Underground Injection Permits

The principal Federal program applicable to intentional discharges to groundwater is the Underground Injection Control (UIC) Program established by Section 1421 of the Safe Drinking Water Act. The UIC program and permits in Oregon are issued by the Department of Environmental Quality. No underground injection wells are proposed as a part of the Coyote Springs Cogeneration Project.

6.18 Permits from the Army Corps of Engineers

The U.S. Army Corps of Engineers administers several permit programs that may apply to certain new power resource projects.

6.18.1 Rivers and Harbors Act

A permit from the Corps is needed under Section 9 of the Rivers and Harbors Act of 1899 for constructing a dam or dike in navigable waters in the absence of Congressional consent and approval of the plans by the Chief of Engineers and Secretary of the Army. The term “navigable waters” generally covers waters subject to the ebb and flow of the tide and/or waters usable for commerce transportation.

A permit from the Corps is also required under Section 10 of the Rivers and Harbors Act for constructing structures or work in or affecting navigable waters. No construction is proposed in navigable waters.

6.18.2 Clean Water Act

(See Section 6.16)

6.19 Notice to the Federal Aviation Administration

Construction of tall facilities such as emission stacks and transmission lines at a power generation site may require notice to the Federal Aviation Administration (FAA). Specifically, building any facility 61 m (200 ft.) or more above ground level requires notice to FAA. FAA must also be notified when facilities are to be constructed near airports. PGE has submitted plans for Coyote Springs facilities to FAA. Airway marking will not be required for the proposed facilities (PGE, 1994)

6.20 Permits under the Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), as amended, is designed to provide a program for managing and controlling hazardous waste by imposing requirements on generators and transporters of this waste, and on owners and operators of treatment, storage, and disposal (TSD) facilities. Each TSD facility owner or operator is required to have a permit issued by EPA or the state. Construction and maintenance activities in BPA's experience have generated small amounts of hazardous waste. These typically include: solvents, pesticides, paint products, motor and lubricating oils, and cleaners. Under EPA and Oregon regulations, the amounts of these wastes generated by the Coyote Springs Cogeneration Plant would fall within the definition for a "small quantity generator." PGE will formulate a hazardous waste management program that meets all Federal and State hazardous waste requirements.

To Chapter 7